

### **REMARKS**

By this Amendment, Applicants have amended the specification, and amended claims 1, 6, 13, 22, 24, 25, 27, 29, 30, 32, and 33.

In the last Office Action, the Examiner:

- (a) objected to the specification for using the term "Woods lamp;"
- (b) rejected claims 1-8, 10-23, 26-28, and 31-33 under 35 U.S.C. § 103(a) over U.S. Patent No. 6,208,749 ("*Krusin*") and U.S. Patent No. 6,571,003 ("*Hillebrand*");
- (c) rejected claims 24 and 29 under 35 U.S.C. § 103(a) over *Krusin*, *Hillebrand*, and U.S. Patent No. 4,253,086 ("*Szwarcwier*");
- (d) rejected claims 25 and 30 under 35 U.S.C. § 103(a) over *Krusin*, *Hillebrand*, and Ultraviolet Radiation, EHC Journal, 1994 ("*EHC Journal*"); and
- (e) rejected claims 34-37 under 35 U.S.C. § 103(a) over U.S. Patent No. 5,308,609 ("*Etheridge*") and *Hillebrand*.

#### ***Objection To Specification***

Applicants respectfully traverse the objection to the specification for using the term "Woods lamp." On page 2 of the Office Action, the Examiner alleges that "Woods lamp" is a trademark, and thus, should be capitalized and accompanied by generic terminology. To the best of Applicants' knowledge, "Woods lamp" is not a trademark and therefore does not need to be capitalized pursuant to M.P.E.P. § 608.01(v). However, in order to advance the prosecution of this case, Applicants have amended the specification to generically describe a "Woods lamp" as an "ultraviolet lamp."

#### ***Rejections Under 35 U.S.C. § 103(a): Claims 1-8, 10-23, 26-28, and 31-33***

Applicants respectfully request that the Examiner withdraw the rejection of claims 1-8, 10-23, 26-28, and 31-33 under 35 U.S.C. § 103(a) over *Krusin* and *Hillebrand*

because the cited references fail to teach or suggest, separately or in combination, each and every element in the claims.

Specifically, for claim 1, *Krusin* fails to teach at least “receiving at least one image of at least one portion of a subject's facial skin, wherein the at least one image includes facial features enabling substantial identification of the subject's identity,” as recited in the amended claim. *Krusin* merely discloses a system for multispectral imaging and characterization of skin tissue, which uses a digital camera to directly image a region of interest. *Krusin*, 4:12-16, 8:52-59. The region of interest may contain a skin lesion, in which case, *Krusin*'s system processes the imaged region to determine whether the skin lesion is malignant or benign. *Id.*, Abstract. In *Krusin*, the subject in the imaged region of interest is already unidentifiable. See *id.*, Figs. 6-8 and 10. This is not the same as and does not suggest “receiving at least one image of at least one portion of a subject's facial skin, wherein the at least one image includes facial features enabling substantial identification of the subject's identity.”

Further, there is no motivation to combine *Krusin* and *Hillebrand* to cure at least the above deficiencies of *Krusin*. That is, in *Krusin*, there is no need to maintain the subject's privacy by extracting from the image a representation of a skin condition, where the extracted representation includes a skin condition image devoid of substantially all facial features other than the at least one skin condition. Indeed, *Krusin* teaches away from this because, as mentioned above, *Krusin* directly images a region of interest to obtain an image and the subject is already unidentifiable in the image. For example, Figs. 6-8 and 10 of *Krusin* show skin condition images extracted from images of an already unidentifiable subject. Accordingly, there is no motivation to combine

*Krusin* and *Hillebrand* to maintain a subject's privacy by "receiving at least one image of at least one portion of a subject's facial skin, wherein the at least one image includes facial features enabling substantial identification of the subject's identity" and "extracting from the at least one image at least one representation of the at least one skin condition, wherein the extracted representation includes a skin condition image devoid of substantially all facial features other than the at least one skin condition," as recited in claim 1.

Additionally, even if there was motivation to combine *Krusin* and *Hillebrand* (which there is not), the proposed combination renders the teachings of *Krusin* inoperative. As discussed above, *Krusin* teaches directly imaging a skin region of interest. *Krusin* processes this image using complex segmentation and lesion parameter estimation algorithms. *Id.*, 12:58-64, 15:55-61. If the skin image is not a direct image of the region of interest, then those algorithms will more than likely fail. That is, *Krusin*'s system can not receive an image of a subject's facial skin, where the image is large enough for the subject to be substantially identifiable in the image, because those algorithms would more than likely fail to characterize the skin lesion in the image. See *id.*, Figs. 6-8 and 10 (algorithms operating only on small, direct images where subject is unidentifiable).

Thus, for at least the above reasons, *Krusin* fails to teach each and every limitation of claim 1 and there is no motivation to combine *Krusin* and *Hillebrand* to cure the deficiencies of *Krusin*. Accordingly, the rejection of claim 1 under 35 U.S.C. § 103(a) over *Krusin* and *Hillebrand* should be withdrawn, and claim 1 should be allowed.

Although independent claims 6, 22, 27, 32, and 33 have different limitations and different scopes from claim 1, the rejection of those claims under 35 U.S.C. § 103(a) over *Krusin* and *Hillebrand* should also be withdrawn and those claims should also be allowed at least for reasons similar to the ones discussed above for claim 1.

Dependent claims 2-5, 7, 8, 10-21, 23, 26, 28, and 31 depend upon either claim 1, 6, or 27, and are allowable over *Krusin* and *Hillebrand* at least by virtue of their dependence upon one of those allowable claims, in addition to the patentable subject matter recited respectively in claims 2-5, 7, 8, 10-21, 23, 26, 28, and 31.

***Rejections Under 35 U.S.C. § 103(a): Claims 24 and 29***

Applicants respectfully submit that the rejection of claims 24 and 29 under 35 U.S.C. § 103(a) over *Krusin*, *Hillebrand*, and *Szwarcbier* should be withdrawn because the cited references fail to teach or suggest, separately or in combination, each and every element in the claims, as amended.

Specifically, for reasons similar to the ones discussed above for claim 1, *Krusin* and *Hillebrand*, separately or in combination, fail to teach or suggest at least “receiving at least one image of at least one portion of a subject’s facial skin, wherein the at least one image includes facial features enabling substantial identification of the subject’s identity” and “extracting from the at least one image at least one representation of the at least one skin condition, wherein the extracted representation includes a skin condition image devoid of substantially all facial features other than the at least one skin condition,” as recited in claim 24. *Szwarcbier* fails to cure the above deficiencies of *Krusin* and *Hillebrand*. *Szwarcbier* merely discloses a process and apparatus for identification of a person using fingerprints. *Szwarcbier*, 1:12-17.

Accordingly, for at least the above reasons, the rejection of claim 24 under 35 U.S.C. § 103(a) over *Krusin*, *Hillebrand*, and *Szwarcbier* should be withdrawn, and claim 24 should be allowed. Claim 29 should also be allowed at least by virtue of its dependence upon allowable claim 24, in addition to the patentable subject matter recited therein.

***Rejections Under 35 U.S.C. § 103(a): Claims 25 and 30***

Applicants respectfully submit that the rejection of claims 25 and 30 under 35 U.S.C. § 103(a) over *Krusin*, *Hillebrand*, and *EHC Journal* should be withdrawn because the cited references fail to teach or suggest, separately or in combination, each and every element in the claims.

Specifically, for reasons similar to the ones discussed above for claim 1, *Krusin* and *Hillebrand*, separately or in combination, fail to teach or suggest at least “receiving at least one image of at least one portion of a subject’s facial skin, wherein the at least one image includes facial features enabling substantial identification of the subject’s identity” and “extracting from the at least one image at least one representation of the at least one skin condition, wherein the extracted representation includes a skin condition image devoid of substantially all facial features other than the at least one skin condition,” as recited in claim 25. *EHC Journal* fails to cure the above deficiencies of *Krusin* and *Hillebrand*. *EHC Journal* merely discusses environmental health criteria of ultraviolet radiation. *EHC Journal*, at 1.

Accordingly, for at least the above reasons, the rejection of claim 25 under 35 U.S.C. § 103(a) over *Krusin*, *Hillebrand*, and *EHC Journal* should be withdrawn, and claim 25 should be allowed. Claim 30 should also be allowed at least by virtue of its

dependence upon allowable claim 25, in addition to the patentable subject matter recited therein.

***Rejections Under 35 U.S.C. § 103(a): Claims 34-37***

Applicants respectfully traverse the rejection of claims 34-37 under 35 U.S.C. § 103(a) over *Etheridge* and *Hillebrand* because the Office Action fails to set forth a *prima facie* case of obviousness.

On page 14 of the Office Action, the Examiner admits that *Etheridge* does not teach “extracting from the at least one image at least one representation of the at least one hair condition,” as recited in claim 34. The Examiner then alleges that the combination of *Etheridge* and *Hillebrand* suggests this “extracting” feature. However, *Etheridge* merely discloses a protocol to characterize hair fibers. *Etheridge*, 7:50-54. The hair samples are visually examined under a polarizing microscope for hair features, such as thickness, uniformity, and condition of the hair. *Id.*, 7:60-69. In contrast, *Hillebrand* discloses using image processing to analyze skin images. *Hillebrand*, Abstract. Nothing in *Hillebrand* suggests using its image processing techniques to analyze hair images, and *Etheridge* does not even mention using image processing. Indeed, *Etheridge* teaches away from “extracting from the at least one image at least one representation of the at least one hair condition” because it is directed to analyzing hair by visual examination, not image processing.

For claim 36, *Etheridge* does not teach at least “extracting from the at least one image at least one representation of the at least one nail condition,” as recited in the claim (emphasis added). As discussed above, *Etheridge* merely discloses a protocol to characterize hair fibers by visual examination under a polarizing microscope for hair

features, such as thickness, uniformity, and condition of the hair. *Id.*, 7:50-54, 7:60-69.

In contrast, *Hillebrand* discloses using image processing to analyze skin images.

*Hillebrand*, Abstract. Nothing in *Hillebrand* suggests using its image processing techniques to analyze nail images, and *Etheridge* does not even mention using image processing. Indeed, *Etheridge* teaches away from “extracting from the at least one image at least one representation of the at least one nail condition” because it is directed to analyzing hair by visual examination, not nails by image processing.

Accordingly, for at least the above reasons, the rejection of claims 34 and 36 under 35 U.S.C. § 103(a) over *Etheridge* and *Hillebrand* should be withdrawn, and claims 34 and 36 should be allowed. The rejection of dependent claims 35 and 37 over *Etheridge* and *Hillebrand* should also be withdrawn at least by virtue of their dependence upon allowable claim 34 or 36, in addition to the patentable subject matter recited therein.

### **CONCLUSION**

Applicants request reconsideration of this application and the timely allowance of the pending claims.

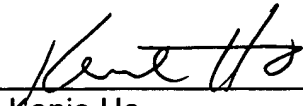
Applicants note that the Office Action contains numerous statements reflecting assertions concerning the related art and claims. Regardless of whether any such statement is addressed specifically herein, Applicants decline to automatically subscribe to any assertion and/or characterization set forth in the Office Action.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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